

## Patent Abstracts of Japan

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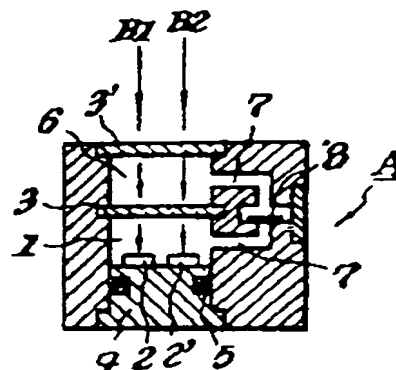
APPLICATION DATE : 08-07-78  
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INT.CL. : G01N 21/61

TITLE : PHOTO-ACOUSTIC ANALYZER



ABSTRACT : PURPOSE: To ensure a high-accuracy detection of the minute difference between several units of samples by piling the reference room upon the sample room containing several samples in it and with linkage between these two rooms, irradiating the same amount of the optical energy to each sample alternately and intermittently and then detecting at the linkage part the movement of the gas caused by irradiation of the optical energy.

CONSTITUTION: Samples 2 and 2' to be analyzed are provided into sample room 1, and light transmission window 3 is provided at the top part of the room. Reference room 6 containing window 3' is piled upon room 1, and both rooms are linked to each other via path 7 to form a sealed container. This contained is filled up with the air, nitrogen or the like. After this, optical energy  $B_1$  and  $B_2$  featuring the same wavelength and same intensity are irradiated to samples 2 and 2' in room 1 alternately and intermittently through window 3 and 3' plus room 6 respectively. As a result, the gas in the container is moved, and this movement of the gas is detected by thermal flow meter type detector element 8 provided at path 7. Thus, the difference between the samples can be detected after simultaneous analysis of each sample under the same conditions and based on the resistance variation of the detector element.

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